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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,375	09/28/2000	Makarem A. Hussein	04290.P6126D	8484

7590

11/13/2002

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EXAMINER

OWENS, DOUGLAS W

ART UNIT PAPER NUMBER

2811

DATE MAILED: 11/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/672,375

Applicant(s)

HUSSEIN, MAKAREM A.

Examiner

Douglas W Owens

Art Unit

2811

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 23 October 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 12-17.

Claim(s) withdrawn from consideration: _____

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____

Tom Thomas
TOM THOMAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Continuation of 5. does NOT place the application in condition for allowance because: The applicant's arguments that the claimed invention is not anticipated by Obeng et al. are not convincing. The applicant relies on the passage in lines 21-24 of column 4 to argue that Obeng et al. teaches that the conductive material is deposited on a barrier/adhesion layer as opposed to being deposited directly on the circuit device (22). The passage the applicant relies on is a description of the incomplete structure of Fig. 1(b). This passage describes forming a barrier/adhesion layer (which the patent office has agreed is likely represented by the dark line under the device), and then forming circuit device (22 (left side of the structure)) on the barrier/adhesion layer. Obeng et al further discloses in lines 26-33 of the same column, that the exposed copper layer (22) is passivated with self assembling film 24 as shown in Figs. 1(c) and 1(d). Fig. 1(d) in particular shows the exposed circuit device (22) directly connected to interconnect layer (20). The applicant further argues that the patent office has admitted that the "dark line" may represent a seed layer. However, the dark line referred to by the patent office is the line which underlies the circuit device (22). This line does not exist above the device and there is no disclosure by Obeng et al. of forming a seed/barrier/adhesion layer on the surface of the device (22). The applicant argues that the barrier/adhesion layer 'should' exist between the first copper layer (22) and the second layer (20), reasoning that this is so because Obeng et al. would have repeated the same steps used to form the first conductive layers. The applicant has provided no support for this argument. Additionally, Obeng et al. explicitly states that copper layer 22 is exposed in lines 31-33 of Col. 4. Claims 15 and 17 only require that the barrier can be selectively etched in the presence of the seed material. Since the barrier layer and seed materials are different from each other, they would have indeed had different etch characteristics. Additionally, other processes can be employed to etch the barrier material in the presence of the seed material..